

Claims

In the claims:

1. (previously amended) An event historian for batch processing comprising:
a history executive element for receiving process event information and batch procedure event information from multiple input sources operating in different physical elements of a process and for automatically deriving relationships among portions of said process event information and batch procedure event information based on generated event messages;
a storage element coupled to said executive element for persistently storing said process event information and said batch procedure event information and said derived relationships in response to requests from said history executive element; and
an event information retrieval element for retrieving said process event information and said batch procedure event information in accordance with said derived relationships in response to requests from an application process.
2. (Original) The event historian of claim 1 further comprising:
a continuous data collection element for gathering continuous data in real time wherein said continuous data relates to at least one procedural element of a batch process.
3. (previously amended) The event historian of claim 2 wherein said information retrieval element further comprises:
a batch historian view client application for graphically presenting to a user said batch procedure event information and said relationships and said continuous data.
4. (previously amended) The event historian of claim 1 wherein said information retrieval element further comprises:
a batch historian view client application for graphically presenting to a user said batch procedure event information and said relationships.

5. (Original) The event historian of claim 1 further comprising:
 - a batch event generator coupled to said history executive element as a first input source wherein said batch event generator generates events indicative of execution of procedural elements of a batch process; and
 - a process event generator coupled to said history executive element as a second input source wherein said process event generator generates events indicative of procedural elements performed within equipment used in the control of said batch process.
6. (Original) The event historian of claim 5 further comprising:
 - a continuous data collection element for gathering continuous data in real time wherein said continuous data relates to at least one procedural element of a batch process,
 - wherein said process event generator comprises:
 - an event log generated by said continuous data collection element.
7. (Original) The event historian of claim 6 wherein said history executive element includes:
 - a history correlation element for relating said batch events and said process events and said continuous data.
8. (previously amended) In a batch processing system, a batch history view client application comprising:
 - means for retrieving batch procedure event information and process event information from multiple sources operating in different physical elements of a process corresponding to an identified batch; and
 - means for visually presenting to a user said batch procedure event information and process event information and automatically deriving relationships among portions of said batch procedure event information and process event information.

9. (previously amended) The view client of claim 8 wherein said means for visually presenting further comprises:
means for presenting said batch procedure event information and process event information and said derived relationships as a Gantt chart wherein said Gantt chart is representative of procedural elements of the batch procedure.
10. (previously amended) The view client of claim 9 wherein said means for presenting said batch procedure event information and process event information and said derived relationships as a Gantt chart further comprises:
means for presenting said Gantt chart in an absolute time scale.
11. (Original) The view client of claim 9 wherein said means for presenting said batch procedure event information and process event information and said derived relationships as a Gantt chart further comprises:
means for presenting said Gantt chart in a batch relative time scale.
12. (previously amended) The view client of claim 8 further comprising:
means for retrieving other batch procedure event information corresponding to a second identified batch; and
means for presenting to a user said other batch procedure event information and relationships among portions of said other batch procedure event information wherein said means for presenting said other batch procedure event information includes:
means for indicating differences between said batch procedure event information and said other batch procedure event information.
13. (previously amended) The view client of claim 12 wherein said other batch procedure event information represents processing of a golden batch for comparison with other batches represented by said batch procedure event information.

14. (previously amended) The view client of claim 12 wherein said means for visually presenting includes means for presenting said batch procedure event information and said relationships in real time as said batch procedure event information is generated.
15. (previously amended) The view client of claim 14 wherein said means for presenting said batch procedure event information in real time includes means for scrolling said batch procedure event information horizontally across a user display screen.
16. (previously amended) The view client of claim 14 further comprising:
continuous data collection means for gathering continuous data in real time wherein said continuous data relates to at least one data point of a batch process,
wherein said means for presenting said batch procedure event information in real time includes means for presenting said continuous data in real time as said continuous data is gathered.
17. (Original) The view client of claim 16 wherein said means for presenting said continuous data in real time includes means for scrolling said continuous data horizontally across a user display screen.